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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/518,225

12/16/2004

Yasuhiro Yoshikawa

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52835

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09/11/2008

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EXAMINER

GRANT II, JEROME

ART UNIT

PAPER NUMBER

2625

MAIL DATE

DELIVERY MODE

09/11/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/518,225	<b>Applicant(s)</b> YOSHIKAWA, YASUHIRO	
	<b>Examiner</b> Jerome Grant II	<b>Art Unit</b> 2625	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-21 is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6-8,10 and 22 is/are rejected.
- 7) ☒ Claim(s) 3,5,9 and 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/07; 12/06; 9/06; 12/04</u> .                                | 6) <input type="checkbox"/> Other: ____.                          |

Detailed Action

1.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 6-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taguchi.

With respect to claim 1, Taguchi a light mounting structure comprising a wiring board 12 provided with a mounting pad 14. Taguchi teaches a plurality of light emitting elements 1 arrayed across a substrate 10 with electrode 19 facing the mounting pad 14. Taguchi teaches the electrode 19 is between pad 14 and bump 22, 24. Taguchi teaches adhesion member 50 for adhering the light member to the wiring board and other surfaces. See col. 2, line 60-69. See also element 86 according to co.. 6, lines 37-44.

What Taguchi does not show is the bump between the electrode and the mounting pad. As mentioned previously, the electrode is between the pad and the bump.

The examiner submits that the position of the bump relative to the pad and electrode does not result in an improvement that is new and useful or non-obvious. Moreover, one of ordinary skill in the art would have known to utilize the arrangement of the elements in the specific order and design convention for the manufacture and design utility. The specific arrangement of the electrode, pad and bump does not generate a new and useful result or a non-obvious result. The arrangement thereof would have been contemplated by one of ordinary skill in the art of manufacturing LEDs.

While Taguchi is directed toward LED devices, one of ordinary skill in the art would have know to look in the analogous art of liquid crystal devices for the light emitting mounting structure that provides the same elemental features for the same purpose which is substantially taught by Taguchi.

With respect to claims 2 and 8, see col. 7, lines 3-12.

With respect to claims 4 and 10, the insulating resin composite is insulating film 16.

With respect to claim 6, this limitation is shown by figure 2.

With respect to claim 7, Taguchi illustrates, at figure 2, the first set of electrode, pad and bump on the left side of the drawing and the second set of bump, electrode and pad on the right side of the figure.

Taguchi a light mounting structure comprising a wiring board 12 provided with a mounting pad 14. Taguchi teaches a plurality of light emitting elements 1 arrayed across a substrate 10 with electrode 19 facing the mounting pad 14. Taguchi teaches the electrode 19 is between pad 14 and bump 22, 24.

Taguchi teaches adhesion member 50 for adhering the light member to the wiring board and other surfaces. See col. 2, line 60-69. See also element 86 according to co.. 6, lines 37-44.

What Taguchi does not show is the bump between the electrode and the mounting pad. As mentioned previously, the electrode is between the pad and the bump.

The examiner submits that the position of the bump relative to the pad and electrode does not result in an improvement that is new and useful or non-obvious. Moreover, one of ordinary skill in the art would have known to utilize the arrangement of the elements in the specific order and design convention for the manufacture and design utility. The specific arrangement of the electrode, pad and bump does not generate a new and useful result or a non-obvious result. The arrangement thereof would have been contemplated by one of ordinary skill in the art of manufacturing LEDs.

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While Taguchi is directed toward LED devices, one of ordinary skill in the art would have know to look in the analogous art of liquid crystal devices for the light emitting mounting structure that provides the same elemental features for the same purpose which is substantially taught by Taguchi.

2.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shibuya in view of Taguchi

Shibuya teaches an optical reading device, shown by figure 4, for reading a document. The device includes a wiring board 1, mounting pad 2, and LED chip 3. See col. 1, lines 10-26.

Shibuya teaches an adhesion member to bond the LED chip to the wiring board.

The bump and electrodes are not disclosed by Shibuya.

Taguchi a light mounting structure comprising a wiring board 12 provided with a mounting pad 14. Taguchi teaches a plurality of light emitting elements 1 arrayed

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across a substrate 10 with electrode 19 facing the mounting pad 14. Taguchi teaches the electrode 19 is between pad 14 and bump 22, 24.

Taguchi teaches adhesion member 50 for adhering the light member to the wiring board and other surfaces. See col. 2, line 60-69. See also element 86 according to co.. 6, lines 37-44.

What Taguchi does not show is the bump between the electrode and the mounting pad. As mentioned previously, the electrode is between the pad and the bump.

The examiner submits that the position of the bump relative to the pad and electrode does not result in an improvement that is new and useful or non-obvious. Moreover, one of ordinary skill in the art would have known to utilize the arrangement of the elements in the specific order and design convention for the manufacture and design utility. The specific arrangement of the electrode, pad and bump does not generate a new and useful result or a non-obvious result. The arrangement thereof would have been contemplated by one of ordinary skill in the art of manufacturing LEDs.

While Taguchi is directed toward LED devices, one of ordinary skill in the art would have know to look in the analogous art of liquid crystal devices for the light emitting mounting structure that provides the same elemental features for the same purpose which is substantially taught by Taguchi.

Since Shibuya teaches the image sensor with a light device, and that the apparatus can be used for scanning a document, the motivation for providing an LED device for use in an image reading device is expressly provided and the specifics of the bum, electrode, and pad would have been recognized as being implemented in an LED or LCD environment.

3.

#### Claims Objected to as Containing Allowable Subject Matter

Claims 3, 5, 9, 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4.

#### Allowable Subject Matter

Claims 12-21 are the prior art does not reasonable suggest the third mounting pad and the corresponding structure related thereto as claimed.



5.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerome Grant II whose telephone number is 571-272-7463. The examiner can normally be reached on Mon.-Fri. from 9:00 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles, can be reached on 571-272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jerome Grant II/

Primary Examiner, Art Unit 2625